K8 LED

PORTABLE WORKLIGHT

Operating Instructions

HY-RAM

www.hyram.com

Thank you for purchasing the all new Supalite K8 LED portable worklight. This product design represents the latest technology in LED portable lighting and is designed to be virtually maintenance free and robust enough to deal with the rigors of a harsh work environment.

OPERATION - QUICK START

Press once ⏻ to switch on and again to switch off. Whenever the unit is first switched on it will default to the 100% brightness setting regardless of how the unit was last used. At switch on you will hear a bleep from the unit to signal all is well (a second double bleep will be heard if the unit is on charge at the same time), the status LED near to the on/off switch will illuminate to show the units state of charge. Note when the K8 is switched on the battery status always takes precedent over the charging status.

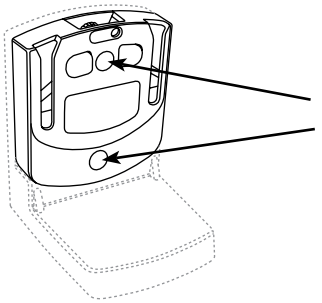
Use the second 'brightness' button ☀ to scroll through the three settings of 100%, 66% and 33%, each press of the button changes to the next setting.

Note: always remember to put your K8 LED on charge after use (Whether used for a short period or the full duration) to prolong the life of the high capacity rechargeable battery. This is especially important if you have purchased a sealed lead acid (SLA) battery, as leaving an SLA battery in a discharged state for more than 24 hours has a detrimental effect on its capacity and lifespan.

CHARGING YOUR K8 LED

Your K8 LED is supplied with a bespoke docking charge rack to provide a convenient and secure way to store and charge it. This multifunctional rack can be used as a stand alone unit to sit upon a desk/bench, or can be fixed to a wall or inside a vehicle as a secure permanent fixture.
The charge rack can be separated from the right angle support stand by undoing the two M6 bolts (see fig 1 below).

fig 1



Once separated the same holes can be used to mount the charge rack with or without the right angled stand to a wall or other fixed location. Take care not to over tighten the fixings and mount on a flat/level surface so the charge rack/stand aren't distorted or damaged.

Please note your K8 LED and its docking charge rack should be located outside of the passenger compartment on a vehicle so they don't form an obstruction or danger to the occupants in the event of an accident or sudden stop.

The charge rack features a self locking system to hold the K8 in place and prevent it 'jumping' out of its holder under harsh movements such as in a vehicle or onboard a boat etc. To release the K8 depress the blue button as illustrated and lift the k8 upwards from the rack. In addition the blue lever on top of the rack can be moved to the right and a small padlock placed through the aligned holes to prevent removal of the K8 by unauthorized personnel. Please note the lever has to be moved back to the left to allow the blue button to be depressed and the K8 removed from the rack.

fig 2




Your K8 LED is designed so that it can be run and charged at the same time should this be necessary, the onboard charger provides enough power to charge as well as maintain power to the light at the same time.

The K8 can be powered from either a mains or vehicle power supply. The charge rack comes with a 'Cigar' style plug (fitted with a 5 amp anti surge fuse) on 1.5 metres of cable and will suit most vehicle accessory outlet sockets. The charge rack accepts an input voltage of 12-30V DC but the supply must be able to sustain a minimum of 5 amps at 12V DC to enable the K8 to charge correctly. Please ensure the supply and its wiring are suitable to maintain this and make sure all connections to the Cigar plug are secure to avoid power interruptions to the charge rack which could cause the K8 not to complete a charge.

To charge from a mains supply you will need the K8 mains adaptor (SLK8LED/MC) which accepts an input of 100-240V AC 50/60HZ 1.5A. It comes fitted with a female Cigar lighter style socket allowing the charge rack to be swapped between both vehicle and mains supplies with ease. Whether a mains or vehicle supply is used the K8 can be left indefinitely connected keeping it always topped up and ready for use. The K8's advanced charging electronics ensure efficiency and only the minimum amount of power is used to recharge, even once recharging is complete and the supply is left connected.

Charge Indication – Your K8LED indicates each step of the recharging process through the changing colours on the K8 status LED. As soon as you place the K8 on charge you will hear a two tone bleep to indicate it has started charging. Depending on the battery's state of charge will determine whether the status LED shows Red, amber or green. Red shows the battery is low and the maximum amount of energy is being put back in to the battery to recharge it. As the battery gets to around 80% charged the status LED will show amber where upon it will enter the next charging phase (note this is disproportionately longer than the time it takes to get to 80% in the red status), finally the status will change to green and then approximately 15 mins later flashing green where upon the unit can be left on charge indefinitely or be 100% ready for use. When you remove the K8 from the charge rack or remove power from it you will hear a double bleep to signify its no longer on charge.

NOTE always charge your K8 LED in a dry well ventilated environment away from minors.

USING YOUR K8 LED

Status LED Indication – If the K8 is neither switched on or on charge then the status LED will blink blue to indicate it is 'alive' and well. This subtle blue signal uses a very insignificant amount of power and is useful if trying to locate the K8 in the dark. If the blue light isn't blinking then this signifies that the battery inside has been left to go very low and needs to be recharged as soon as possible. The K8 should never be left to get to this point as it will have an adverse affect on the life of the battery.

When switched on the K8 will always show the status of the battery which takes precedent over the charge status if it's still on charge. Depending on the level of charge the status LED will indicate green to signify the unit still has plenty of charge in the battery, as the status indicator moves to amber you'll hear a bleep from the K8 warning you of the change, the K8 is now down to approximately 35% of its capacity. The next change will be at red when it's down to approximately 15% capacity, then finally flashing red at which point the K8 drops the power level down to the lowest 33% setting where it will remain till it finally cuts out. Please use the LED status as an indicator only and not an accurate representation of time. The idea is that it warns the user through a bleep at each change of the LED status so provisions can be made to finish a task where the light is being relied on and not leave its user in the dark without warning!

The K8 LED can be set up in two basic modes, torch mode and worklight mode.

Torch mode: allows the user to carry the unit with the extension arm and head folded down and locked in position. Carry the torch by the handle and direct it as needed. In addition the K8 is supplied with a high quality adjustable shoulder strap to make it comfortable to carry the K8 whilst keeping your hands free to perform other tasks. See the pictures below showing fitting and removal of the straps.

fig 3 **Fitting** **Removal**

Worklight mode: allows the user to site the unit in a suitable position on the ground or on a tripod/ higher surface where the arm can be unlatched and swung up and into position. The light head can then be turned in either direction and the angle can adjusted as required. Please remember to place your K8 safely where the light cannot form a nuisance or be an obstruction/hazard to others.

Your K8 is designed to work in a harsh environment from low through to high temperatures. While high temperatures can have an adverse effect on LEDs this unit has been designed to counteract

this if ever the situation arose. A temperature sensor monitors the LED light engine and adjusts the power output accordingly without a major effect on the light performance.

OPERATION - ADVANCED FEATURES

To use the unit simply press the ⏻ button and the light will come on to 100% power/brightness and is ready for use. Subsequent presses of the brightness button ✳ reduces the power to 66% then 33% then back to 100%. Turning the unit off then on always brings the power back on at 100% regardless of how the light was last used/set.

SOS Mode: to activate the SOS flash sequence switch the unit on ⏻ then press and hold the brightness button ✳ for approximately three seconds, release the button once you see the light start to flash. To come out of this mode press the on/off button ⏻ once and the light will stop flashing and the unit will turn off.

Flashing Mode: to activate the steady flashing (approx once every two seconds), turn the unit on ⏻ then press and hold the power button ⏻ for approximately three seconds, release the button once you see the light start to flash. To come out of this mode press the on/off button ⏻ once and the light will stop flashing and the unit will turn off.

Emergency Mode: this feature turns your portable light in to an automatic emergency light, triggered to come on when the mains power fails. Simply switch on your K8 then place it into the charge docking station, switch on the power to the docking station from your mains adaptor SLK8LED/MC, the light will now go out and the coloured status LED will flash the charge status (red, amber or green) with the standby status blue. If the mains supply is then interrupted to the charge docking station the light will automatically be switched on providing full 100% power for the duration of the battery charge in the K8 or until you switch the unit off. To cancel this mode whilst on charge simply press the power button on then off.

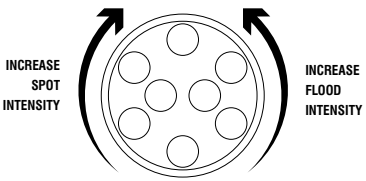
Note – we don't recommend you use this function in a vehicle or where there are or could be frequent power interruptions that could distract the user in a vehicle or render the K8 left uncharged and not ready for use.

Light Management

The unit features a rotating vari-focus system to allow a tightly focused spot beam or a diffused flood of light so any working environment can be catered for. Rotate the bezel on the front of the K8 clockwise to gradually diffuse the light and anti clockwise to increase the spot intensity (fig 4). As the diffuser gradually passes over the LEDs you'll notice the projected light pattern change and the intensity of the spot disappear but the intensity of the wide flood increase.

fig 4

Adjusting beam from Spot to Flood



Although the K8 produces a very powerful clean spot beam which projects hundreds of metres it also produces a powerful flood of light at the same time so far more of the local area you are using it in is lit.

Battery Status Indication

A low battery warning with cut-off function is included with your K9 30 LED to prevent deep discharging the high performance cyclic SLA battery. Deep discharging can lead to reduced battery performance and life.

The user is signalled to help pre-warn of the amount of energy left in the battery able to run the LED light in 3 ways: 3 colour LED, audible bleeper and flashing of the LEDs on the main panel. As the fully charged battery discharges the indicator LED (located next to the power on/off switch) will show green.

As the battery discharges further this indicator LED will change from green through to amber, at this point the unit will give an audible bleep and blink the main LEDs once to alert the user that a stage has been reached in the discharge process.

The next change is when the LED indicator changes from amber to red; here again the user will hear an audible bleep and see a blink of the main LEDs to signal another change nearer to the end of battery duration.

Finally the indicator LED will change from constant red to flashing red where upon the lamp brightness will default from any of the power settings down to 25%, the beeper will then sound every 30 seconds and at the same time the main LEDs will blink once. This process will continue until the battery voltage falls to a point where the unit will automatically switch off. This process will give users adequate time to retreat to an area of safety without being left in the dark.

The light cannot be switched back on until the battery has been recharged to prevent deep discharge and possible irreversible damage to the battery.

Performance

The SLK8LED uses 8 high power/flux SMD LED's to produce a crisp white light ideal in a working environment. To efficiently harness and project the light, this unit has a bespoke spot biased reflector with the addition of an infinitely variable focusing system to produce a clean flood of glare free light. In addition, conscious of the lack of an infinite power source, we have developed a market leading LED driver system to ensure very little energy is wasted with the majority being converted to light to give a better, brighter light for longer.

Construction

The K8 LED has been constructed using high quality materials to produce a tough, long lasting product for the professional user. High impact engineering polymers combined with stainless steel fittings ensure the K8 LED is impervious to everyday knocks and bangs.
In addition the LED's and electronics are of a bespoke design to maximize efficiency, reliability and versatility using the latest available advances in design.

OPTIONAL EQUIPMENT

Additional height (Product Code SLK8LED/TRP)
This can be achieved using the available tripod system with adaptor and raises the height of the K8 up to approximately 2.5 metres making a very versatile area flood light system.

Mains Adaptor (Product Code SLK8LED/MC)
Supalite K8 LED Mains Adaptor 100-240V AC allows the unit to be recharged from a mains supply opposed to just a vehicle supply.

Docking charge rack (Product Code SLK8LED/VC)
Additional docking charge racks are available so you have the versatility of one in a vehicle and one in the work place, for example when connecting to the mains adaptor – SLK8LED/MC.

Remote Control (Product codes SLK8LED/HDR and needs SLK8LED/HND)
The optional remote control system allows complete control of brightness, modes and battery status allowing the unit to be placed out of reach yet with full control at your fingertips. In addition any number of extra K8LED units can be automatically switched on and controlled by the one remote through the mesh networking technology employed. One button press can switch on over a hundred units instantly, each unit allows the signal to be rebroadcast so infinite distances and areas can be covered.

In addition, as each command is given the LED on the remote will show the status of the K8 LED battery, the battery status can also be seen without changing a function by pressing the top two buttons on the remote simultaneously.

As a button is pressed you will hear a bleep from the remote, then a second one as confirmation that the action has been received and processed.

Wireless Emergency System (Product Codes SLK8LED/AMF and needs SLK8LED/HDR)
Using the same technology as the remote control this simple “plug in the wall” (or any 110V to 240V AC generator power source) will monitor the power then automatically broadcast a signal to all K8 LED’s to switch them on in a mains failure situation. This simple but effective solution makes a very versatile, wireless portable emergency lighting system, adding new levels of safety and convenience to the work environment.

STORAGE

If the K8 is to be left unused for an extended period of time or the unit is to be put into storage we advise you fully recharge the battery then note this date with a view to recharging the unit within 6 months. If this isn’t done irreversible battery damage may result.

MAINTENANCE

Your K8 LED should need little or no maintenance during its life span other than periodic cleaning of the exterior surfaces, when we suggest using a light detergent and water to sponge off any dirt deposits. Should you encounter a problem then please contact Hy-Ram Engineering Co. Ltd for technical assistance. We suggest the unit be returned to us for any problems that can't be rectified by telephone. Please note there are no user serviceable parts inside and that a competent person must carry out any repairs.

RECYCLING AND THE ENVIRONMENT

Your K8 LED contains various parts that need to be recycled at the end of its life span, please contact your original point of purchase for information on correct recycling of this product to help protect the environment.

TROUBLESHOOTING

1. Light doesn't power up when the on ⏻ button is depressed:

a) Is the blue status LED next to the On/Off switch blinking when the unit is neither on charge or switched on? If not, there is no power in the battery – place the K8 on charge and fully recharge the battery.

b) Is the battery charged up? Recharge the battery fully so the charging status LED has cycled through to flashing green. If there is still no blue LED blinking once the K8 is taken off charge then the unit should be returned to point of purchase for investigation.

c) Does the status LED function as normal? If the status LED alternates between green and amber rapidly when attempting to switch the K8 on this signifies a failure of the main light engine LED(s) or a break in one of the cables supplying them. The K8 must be returned to point of purchase for investigation.

2. Poor run time or no operation at all:

a) Has the battery been left completely flat for an extended period of time? Depending on the battery chemistry (Sealed Lead Acid or Lithium Ion) employed within the K8, will determine how well the unit recovers from being left in a deep discharged state. If the light still doesn't operate after an attempt at fully recharging, or the duration the light runs for before shutting down is significantly reduced from the original specification, then the K8 will need to be returned to point of purchase to have a new battery fitted.

3. No charge indication:

a) The K8 status LED should indicate red, amber or green and you should hear a double beep when the K8 is placed on charge. If neither happens then check the supply to the docking charge

rack which should be between 12.5V* and 30V DC with wiring sufficient to carry up to 5A at 12 volts. If these parameters are not met the K8 will not charge correctly if at all. If the supply is poor you may see/hear random red status LED flashes and beeps from the K8. The supply must be rectified to prevent non charging of the K8 and possible damage to the unit.

**To initiate charging, the K8 must see a voltage of 12.5v DC approx, once started the voltage can be allowed to fall to around 12v, below this the unit will stop charging to preserve the supplying battery, e.g for vehicle starting etc.*

b) Check the 5A fuse in the cigar lighter plug by unscrewing the end cap of the plug and removing the fuse to view whether it's blown or not (Note – take care not to lose the spring and other small parts). If blown, locate the source of the problem, replace the fuse and try again.

c) Check the cigar plug connection is good with the socket it is connected to.

d) Check the docking charge rack terminals haven't been damaged through misuse. They should spring back against the front of the charge rack. To check, remove the K8 from the rack, press the blue buttons on the front face then release them, the two spring terminals should sit up against the grey front of the rack.

Contact Hy-Ram Engineering Co. Ltd on 01623 422982 for technical assistance
or e-mail enquiries@hyram.com.

CONFORMANCE

CE Marked. This product has been tested and conforms to EN 61000-6-3 and EN 61000-6-4.

IP54 Rated - Protected against dust with limited ingress, and against water spray from all directions.

OPTIONAL REMOTE CONTROL

Contains Transmitter Module FCC ID: OA3MRF24J40MA

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

1) This device may not cause harmful interference, and
2) This device must accept any interference received, including interference that may cause undesired operation.

TECHNICAL DATA

LAMP TYPE	8 x High Power / Flux SMD LED's
COLOUR TEMPERATURE	Nomimal 6500 Kelvin
LUMENS OUTPUT AT 100% SETTING	>2,500
LUMENS OUTPUT AT 66% SETTING	>1,800
LUMENS OUTPUT AT 33% SETTING	>1,000
NOMINAL LIFE EXPECTANCY OF LED'S	50,000 Hours
BATTERY TYPE SLA *	12V / 9AH SLA battery 108 W/H
BATTERY TYPE LITHIUM 1 *	14.8V 12AH Lithium Ion Battery 177.6 W/H
BATTERY TYPE LITHIUM 2 *	14.8V 20AH Lithium Ion Battery 296 W/H
POWER CONSUMPTION MAX	22.5 Watts (100% mode)
POWER CONSUMPTION MEDIUM	15 Watts (66% mode)
POWER CONSUMPTION LOW	7.5 Watts (33% mode)
OPERATING MODES	Choice of 4 main modes
1. WORKLIGHT	3 brightness levels, press brightness button to cycle through 100/66/33%
2. FLASHING SIGNAL	Press and hold on ⓜ button for 5 seconds
3. SOS SIGNAL	Press and hold brightness ✳ button for 5 seconds
4. EMERGENCY LIGHT	Automatically comes on when a power failure is detected
FOCUSING SYSTEM	Variable intensity from spot to full flood
DURATION / BRIGHTNESS LEVEL	* SUBJECT TO AMBIENT TEMPERATURES
1. SLA (33%)	Approx 12 hours
2. LITHIUM 1 (33%)	Approx 21 hours
3. LITHIUM 2 (33%)	Approx 39 hours
4. SLA (66%)	Approx 6 hours
5. LITHIUM 1 (66%)	Approx 10.5 hours
6. LITHIUM 2 (66%)	Approx 19.5 hours
7. SLA (100%)	Approx 4 hours
8. LITHIUM 1 (100%)	Approx 7 hours
9. LITHIUM 2 (100%)	Approx 13 hours
SAFETY SHUTDOWN DURATING AT 33%	
SLA	Approx 30 mins
LITHIUM 1	Approx 45 mins
LITHIUM 2	Approx 60 mins
RECHARGING TIMES	
SLA	Approx 6 hours
LITHIUM 1	Approx 7 hours
LITHIUM 2	Approx 9 hours
NOMINAL OPERATING VOLTAGE	12-30V DC
CIRCUIT PROTECTION	Internal circuit fusing
EXTERNAL PROTECTION	5A anti-surge 32mm fuse in cigar plug
PROTECTION CLASS	IP66 for water / dust ingress

TECHNICAL DATA (CONTINUED)

WEIGHT	
K8 SLA	4.1 Kg
K8 LITHIUM 1	2.8 Kg
K8 LITHIUM 2	3.5 Kg
CHARGE RACK ONLY	0.480 Kg
MAINS ADAPTOR	0.450 Kg
DIMENSIONS WITH HEAD EXTENDED UP (L x W x H)	205mm x 125mm x 500mm
DIMENSIONS WITH HEAD PACKED DOWN (L x W x H)	288mm x 125mm x 170mm

OPTIONAL EXTRAS

SLK8LED/MC	Supalite K8 LED mains adaptor 100-240V AC (UK plug)
SLK8LED/LED	Docking charge rack
SLK8LED/HND	MESH remote control: maximum range 100m
SLK8LED/HDR	Upgrade K8 LED to remote control functionality
SLK8LED/AMF	K8 LED auto mains failure module (UK plug)
SLK8LED/TRP	K8 tripod system - extends height to 2750mm

Note - other country plug types available for mains powered optional extras, please contact Hy-Ram Engineering Co. Ltd for further information.

Patents Pending

CAUTION

- Always read the manual fully before use.
- Use the approved chargers only, other chargers may cause a detrimental effect on the performance of this unit.
- Ensure adequate ventilation for this unit whilst charging.
- Do not stare directly into the light head when powered up.
- Do not completely submerse the unit in water.
- No user serviceable parts inside. Leave servicing to a qualified person.

The contents of this manual are subject to change without prior notice. We take no responsibility for errors or admissions.

HY-RAM

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